

## APPENDIX A

means, to contain biological or synthetic factors that promote attachment, proliferation, differentiation, and/or matrix synthesis of targeted cell types. Furthermore, the bioactive factors may also comprise part of the matrix for controlled release of the factor to elicit a desired biological function. Growth factors, extracellular matrix proteins, and biologically relevant peptide fragments that can be used with the matrices of the current invention include, but are not limited to, members of TGF- $\beta$  family, including TGF- $\beta$ 1, 2, and 3, bone morphogenic proteins (BMP-2, -12, and -13), fibroblast growth factors-1 and -2, platelet-derived growth factor-AA, and -BB, platelet rich plasma, vascular endothelial cell-derived growth factor (VEGF), pleiotrophin, endothelin, tenascin-C, fibronectin, vitronectin, V-CAM, I-CAM, N-CAM, selectin, cadherin, integrin, laminin, actin, myosin, collagen, microfilament, intermediate filament, antibody, elastin, fibrillin, and fragments thereof, and biological peptides containing cell- and heparin-binding domains of adhesive extracellular matrix proteins such as fibronectin and vitronectin. The biological factors may be obtained either through a commercial source or isolated and purified from a tissue.

In yet another embodiment, the three-dimensional structures of the present invention can be seeded or cultured with appropriate cell types prior to implantation for the targeted tissue. Cells which can